

TWO NEW SPECIES OF *MESOCORDYLUS* FROM  
MEXICO AND COSTA RICA  
(COLEOPTERA: CURCULIONIDAE: RHYNCHOPHORINAE)

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ABSTRACT

*Mesocordylus excisus* and *similis* are described from Mexico and Costa Rica, respectively.

The 2 species of the weevil tribe Sipalini described below were sent to me, with the exception of 2 specimens in the American Museum of Natural History, by Mrs. Anne Howden of Ottawa and Dr. Robert E. Woodruff of Gainesville, Florida. Both species were collected at high elevations. These additions bring the total number of species of this Neotropical genus to 26.

*Mesocordylus excisus* Vaurie, NEW SPECIES

(Fig. 1, 2, 8-12)

Type, male, from 15 mi. S of Valle Nacional, Oaxaca, Mexico, 4,000 feet, 20-V-1971, H. Howden, and male paratype with same data in Howden Collection, Ottawa, Canada; 32 mi. S of Valle Nacional, 7,000 feet, 21-V-1971, H. Howden, 1 male in Howden Collection; 8 mi. S of Teziutlan, Puebla, Mexico, 6,575 feet, 30-VII-1955, P. and C. Vaurie, a male and female in the American Museum of Natural History.

DIAGNOSIS: Resembling *scutellaris* and *bracteolatus*, but differing from them by having larger apical spongy part of antennal club (Fig. 11-12); bare, broadly cavernous, excised sides of beak showing basal tooth (Fig. 1, 2); male beak (dorsal view) with parallel sides, not narrowing to apex.

RANGE: Highlands of central and southern Mexico.

Type, male: length 10 mm. Dark red, shining. Beak densely punctate, feebly arcuate; viewed dorsally, feebly wider in front of scrobes than behind, medially carinate with sides behind scrobe virtually straight; laterally, beak only feebly narrowed to apex; ventrally, carinate at middle with sides below rather tumid; antennal scrobe or groove with lower edge slightly dilated, visible from above; anterior edge of scrobe in apical third of beak; base of beak on sides bare of tomentose or spongy areas, thus exposing wide expanse of excavated area. Antennal scape long, about 4 times longer than width at apex; club longer than wide, with spongy apical part slightly more than 1/2 length of club. Pronotum appearing longer than wide, finely, rather densely punctate; punctures larger than those of elytral intervals; sides feebly arcuate; apex deeply transversely incised. Elytral intervals rather flat, 3 to 4 times wider than striae, with flat buffy ringed punctures in single rows; striae punctures obscured. Tibiae slightly incurved at apex; on inner side with sparse hairs. Tarsal segments elongate with short ventral hairs. Aedeagus at apex V- or U-shaped; long, coiled flagellum present.

VARIATIONS FROM TYPE: The male paratype from Teziutlan is only 8 mm long, whereas the female from the same locality is 16 mm; 1 male from the type locality is large also (15 mm), and 1 is small (11 mm). The female (17 mm) differs by having the beak in dorsal view narrower and less punctate in front of the scrobes, the underside of the beak feebly carinate medially and smooth on the sides, and the antennae inserted farther back, nearer the middle of the beak (Fig. 2). In the paratypes the striae punctures of the elytra are readily visible. In addition to the variation in size, there is variation among the paratypes in color (2 are black), in the club, and in the aedeagus. In the specimen from 7,000 feet at Valle Nacional the spongy part of the club is only about 1/2 the length of the club, not longer than 1/2. This paratype differs also slightly in the shape of the apex of the aedeagus (Figs. 9, 10). (Similar variability of the aedeagus has been found in *M. scutellaris*.)

DISCUSSION: This is the third species found in Mexico. *M. mexicanus* Vaurie is recorded (Vaurie, 1970) from the Isthmus of Tehuantepec west on the coast north to the state of Sonora; *M. bracteolatus* Boheman from localities in Veracruz and from Temascal, Oaxaca (it ranges southward to Guatemala and to Panama); in Oaxaca a female was collected on 17-V-1971, by Howden at the type locality of *excisus*, but at 3,000 feet. Both species differ from *excisus* in the shorter apical spongy part of the club, in the tomentose or much less excavated sides of the beak, and in the absence of a readily visible double angulation at the base of the beak. I believe *bracteolatus* has such an angulation, but it is hidden by the thick, tomentose coating. *M. excisus* agrees well with the description of *M. abditus* Vaurie (1970:36) from Panama, but the aedeagus of that species is only shallowly, not deeply, emarginate, and the scrobes are more widely dilated. All specimens were dissected.

### *Mesocordylus similis* Vaurie, NEW SPECIES

(Fig. 3-7)

Type, male, Coronado, Costa Rica, 3-VI-1967, E. B. Fagan, in the Florida State Collection of Arthropods, Gainesville; paratype, female, with same data except date 1-VI-1967, to be deposited in the American Museum of Natural History.

DIAGNOSIS: Similar to *mexicanus* in proportions of club and in virtually non-dilated antennal scrobes, but pronotum narrower, with less arcuate sides, not so bulbous, and with stronger apical impression; elytra more elongate, more than twice length of pronotum; hind tibia wider at apex; beak of female same as that of male, in dorsal view not narrowed in front.

RANGE: Known only from the type locality for which more complete data is Finca Joseph Smids, San Isidro de Coronado (15 miles northeast of San Jose), 5500 feet elevation. The 2 specimens were taken at blacklight traps.

Type, male: length 12 mm. Dark red, shining. Beak in basal half densely punctate, toward apex less punctate; feebly arcuate; dorsally same width in front of as behind scrobes, with sides behind scrobes straight; laterally, beak strongly narrowed to apex; ventrally carinate at middle with sides behind apex rounded, but not tumid; antennal scrobe with lower edge scarcely dilated and barely visible from above; anterior edge of scrobe only slightly in front of middle of beak; base of beak on sides not tomentose. Antennal scape short, not quite 3 times longer than width at apex; club as wide as long, with spongy



apical part nearly  $1/2$  length of club. Pronotum as described for *excisus* but punctures of disc faint or obsolete and other punctures same size as those of elytral intervals. Elytral intervals rather convex, less than twice width of striae; suture with double, other intervals with single rows of small, flat, buffy ringed punctures separated longitudinally by their diameter or twice their diameter; strial punctures larger. Tibiae on inner side with sparse hairs; front tibia straight; hind tibia incurved at apex where feebly widened. Tarsi as described for *excisus*. Aedeagus at apex very broadly U-shaped; long, coiled flagellum present.

VARIATION FROM TYPE: The female paratype is 13 mm long, but is otherwise like the male.

DISCUSSION: Except for the 8 species of the genus that are known from 1 sex only, *similis* is the only species in which no appreciable external sexual difference has been found, the shape of the beak being the same in both sexes. The lower edge of the scrobe, however, is actually slightly dilated and feebly visible from above in the male, but not in the female. *M. bracteolatus* and *M. scutellaris* (Costa Rica and South America) differ from *similis* by having the sides of the beak behind the scrobes angulate when viewed dorsally and the scrobes of the male widely dilated. In all 3 species the spongy apical portion of the club is proportionally shorter than that of *mexicanus* or *excisus* (Mexico). Both specimens of *similis* were dissected.

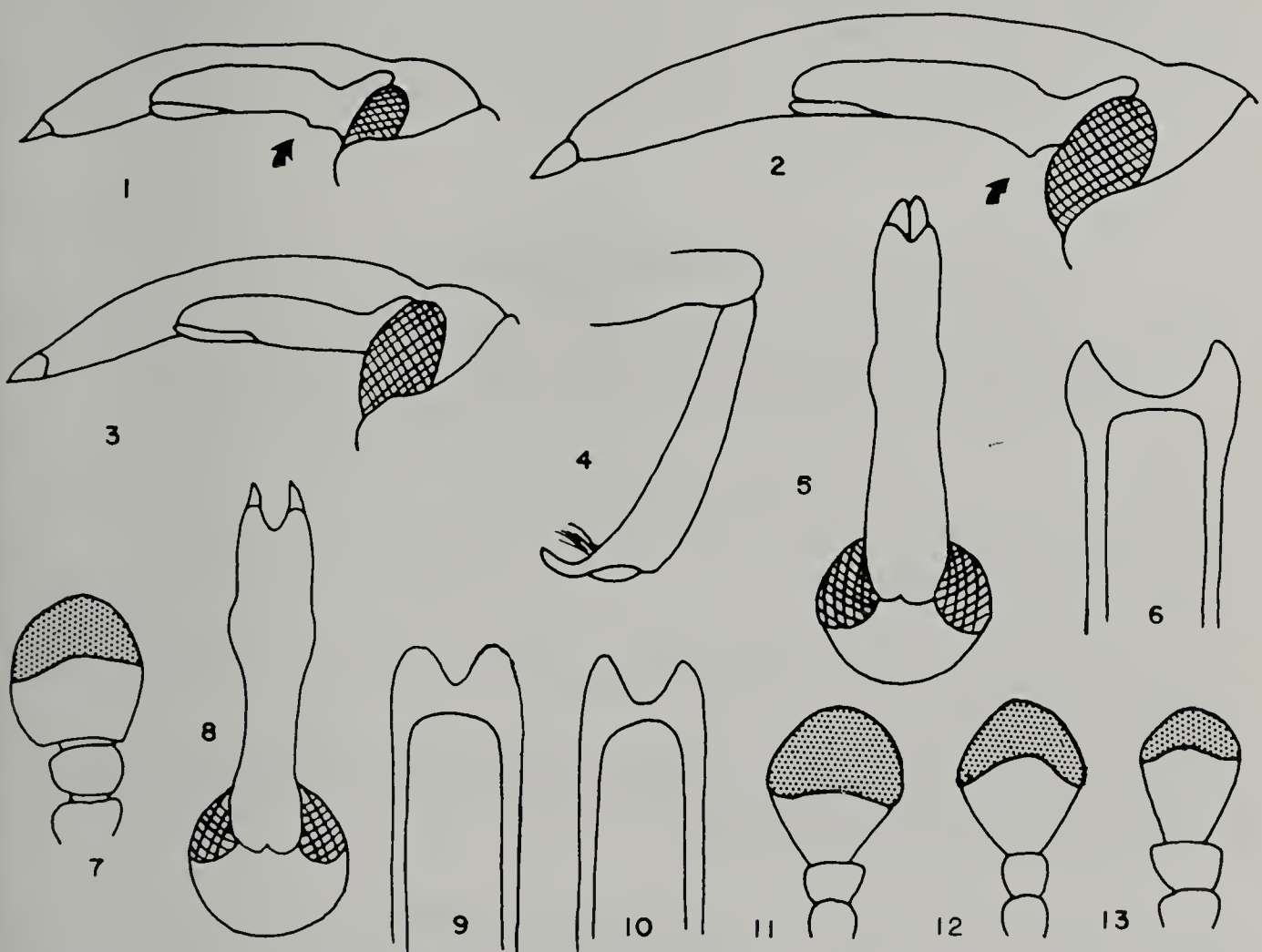


Fig. 1-13: *Mesocordylus*. 1, 2. *M. excisus*, beak: 1) male, 2) female. 3-7. *M. similis*: 3) beak, 4) hind tibia with feeble apical widening, 5) beak, male, dorsal. 6) apex aedeagus. 7) antennal club. 8-12. *M. excisus*: 8) beak, male, dorsal. 9) apex aedeagus, Valle Nacional, 7,000 feet. 10) apex, type and other paratypes. 11) antennal club, type, 12) club, Valle Nacional, 7,000 feet, 13) club, *M. bracteolatus*.

## KEY CHARACTERS

In my key (Vaurie, 1970:13) these 2 new species would come to couplet 14 where the female, but not the male, of *similis* would key to *mexicanus*; *excisus* would proceed to couplet 15 where it would not agree with either statement, but the female might key to *mexicanus*. Couplets 13 and 14 therefore may be substituted by the following:

- |      |  |                         |
|------|--|-------------------------|
| 13a. | Beak at base ventrally bidentate; sides of beak bare and cavernous, without spongy coating; Mexico .....                                     | <i>excisus</i>          |
|      | Beak at base ventrally either not dentate or teeth and sides of beak hidden by yellowish spongy coating; Mexico and elsewhere .....          | 13B                     |
| 13b. | Pronotum behind apex incised deeply from side to side.....   | 14                      |
|      | Pronotum behind apex not or only moderately impressed medially, but may be incised laterally .....   | 16                      |
| 14.  | Antennal club about as wide as long, appearing round .....   | 14A                     |
|      | Antennal club longer than wide, appearing elongate .....   | 15                      |
| 14a. | Pronotum at middle of strongly arcuate sides as wide as elytra; apical impression usually not well marked; hind tibia straight; Mexico ..... | <i>mexicanus</i> (part) |
|      | Pronotum at middle of feebly arcuate sides narrower than elytra; apical incision deep; hind tibia incurved at apex; Costa Rica .....         | <i>similis</i>          |

## LITERATURE CITED

- VAURIE, PATRICIA. 1970. Weevils of the tribe Sivalini (Coleoptera, Curculionidae, Rhynchophorinae) Part 2. The genera *Mesocordylus* and *Orthognathus*. Amer. Mus. Novitates 2441:1-78; Fig. 1-77.



## BOOK REVIEW

*Cinematographic Techniques in Biology and Medicine*, edited by Alexis L. Burton. 1971. Academic Press, Inc., 111 Fifth Ave., N.Y., N.Y. 10003. 394 p., profusely illustrated. Cloth, \$19.50.

For those who want only casual movies to those wanting sophisticated shots of behavior, this book covers the subject thoroughly. It details the properties, storing, handling, and processing of film; equipment (cameras, lighting, light meters); techniques (including microscope adaption, time lapse, title preparation, and simple animation; procedures for editing, analyzing, and abstracting films and the recording and transfer of sound; and the application of television to biology and medicine. A superior book that will open wide your aperture to a fascinating subject.—R. E. Woodruff.